

Fat Zombies, Pleistocene Tastes, Autophilia and the "Obesity Epidemic"

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The Word Made Flesh

At the Royal Tyrrell Museum in Drumheller, Alberta, obesity is not a significant theme. "Skin and (mostly) bones" best describes the members of its splendid collection. But the Calgary Zoo, a side trip on our way home to Vancouver, was a remarkable contrast. Long before reaching the hippo tank, we were struck (sometimes literally) by the extraordinary proportion of visitors who were by any definition morbidly obese. They did not so much walk as launch their bodies in a chosen direction and then follow, as it were, behind. It seemed doubtful whether they could manage an unscheduled stop, let alone exert the mechanical forces necessary for evasive

manoeuvres. The rhetoric of an "obesity epidemic" was dramatically fleshed out.

Our return coincided with the release by Statistics Canada of a series of articles painting a disturbing picture of Canadians as fat, and getting fatter. My extremely casual empiricism was not misleading; 23.1% of adult Canadians are classified as obese (body mass index [BMI] >30) based on actual measurements during the Canadian Community Health Survey (CCHS) of 2004 (Tjepkema 2006: Table 1). Another 36.1% are classified as overweight (25 < BMI < 30). "Normality" (18.5 < BMI < 25) at 38.9% is not the norm. Obesity rates are essentially the same for both men and women – 22.9% and 23.2% (although women are overrepresented: 3.8% compared to 1.6% for men) – in the super-heavyweight obese class III with BMIs over 40. Men (me included) tend to fall in the overweight range (42.0%



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versus 30.2% for women), whereas women are much more likely to be normal (44.1% versus 33.6%).

These rates are well above those reported in the Joint Canada/United States Survey of Health (JCUSH) for 2002–2003. That telephone survey yielded an obesity rate of 15.3–17.9% for men and 12.5% for women (Sanmartin et al. 2004: Table A-6). Apparently people (especially women) under-report their weight, on average by significant amounts – due to embarrassment? denial/wishful thinking? or a simple lack of awareness?

The differences found in the JCUSH between the Canadian and American samples are also reported in Tjepkema (2006: Table 3); comparable direct measurements of BMI for the United States between 1999 and 2002 found 29.7% of Americans to be obese – 26.6% of men and 32.7% of women. So, indeed, Americans, and particularly

ably, we have continued to get healthier and healthier. Yet now we have an epidemic, a crisis, a looming health disaster. Well, the numbers and the trends are what they are, but it is certainly worth asking, “Why now?” What might be behind the recent and widespread excitement? Have we just reached a “tipping point,” or is something else going on?

There seems little room for doubt that, all else being equal, an increasingly obese population will be an increasingly unhealthy population. There is no need here to rehearse the relative risks of diabetes, heart disease, joint damage and, for all I know, the heartbreak of psoriasis. Enough already. The data are in. Extreme overweight is a risk factor for many forms of illness.

But all else is never equal. A nifty article by Banks et al. (2006) reports the health status of samples from similar slices (ages 55–64 years, exclusive of identifiable minorities) of the British and American populations. Their measures, from comparable surveys, combine self-reports of and biological markers for the prevalence of seven major clinical conditions. Remarkably, the UK samples are significantly healthier on these measures than the American. Moreover, while stratifying each sample by income or educational tertiles yields the expected socio-economic class gradient, what was not expected was that

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American women, are fatter. But just being less obese than the Americans, in this league, wins no prize. And all indications are that the trend is upward.

So what?

Grave Consequences or Inflated Concerns? A Contested Epidemic

Well, there are a couple of things to consider. First, what impact might we expect these trends to have on the health of the Canadian population and, in particular, on our healthcare system? And, second, what if anything might we want or be able to do about them? The answer to the first question might seem self-evident, but it is not. The answer to the second might seem much more difficult, and it is. But if we have no good answers to the second question, or at least none that we collectively (not just our political leaders) find acceptable, why are people making such a fuss about the epidemic?

After all, nutritionists have been telling us for at least 50 years that our diets are bad, that we are overweight and that bad things will follow. No one has taken much notice and, incred-

the lowest stratum in the United Kingdom was comparable to or healthier than the highest in the United States. (The income strata were country specific, taking no account of the much higher average incomes of Americans.)

Yet another interesting finding, however, was that while obesity rates were higher in the United States, adjustment for this and other “behavioural” risk factors (tobacco and alcohol use) had no effect on the health differentials. The United States is simply a more unhealthy social environment, quite independent of individual behaviours. (Healthcare is not the explanation either – upper-income Americans have as good access to healthcare as the British, and perhaps better.) At the individual level, obesity is certainly bad for you, and its increase may justify public concern. But a focus on obesity – or other individual risk factors – may amount to counting the peanuts while the elephants of population health slip by. There is a lot more going on. (As there is between Canada and the United States; see Sanmartin et al. [2004] and Siddiqi and Hertzman [2006].)

There are other skeptics: “An increasing number of scholars have begun accusing obesity experts, public health officials and

the media of exaggerating the health effects of the epidemic of overweight and obesity" (Gibbs 2005: p. 70). In particular, lumping together overweight and obesity to declare $\geq 60\%$ of North Americans to be at risk may be well intentioned but has about it a strong scent of fear mongering. A BMI of 40+ is a serious health problem, but values in the mid- to high 20s may have little significance. The majority of those reported as "overweight" are at the low end of that range. ("We're all at risk!" is very inclusive and "PC," but it is also deceptive – even dishonest – if we are at very different risks. We've been here before.)

A Fat Zombie?

As for the healthcare system, well, consider the parallel logics of the "obesity epidemic" and the "crisis" of population aging. The obese are an increasing proportion of the Canadian population, as are the aged. Obese people, like the elderly, are on average sicker and use more healthcare. Escalating healthcare expenditures are a constant concern. All true. Therefore, self-evidently, the aging population and now the obesity epidemic are or will be major cost drivers and a threat to the sustainability of our (public?) healthcare system. Dead wrong.

Study after study by many different research groups with different measures of healthcare use and costs, dating back at least to 1978, have consistently shown that population aging per se makes a relatively small contribution to the escalation of healthcare use and costs. The real cost drivers are changing patterns of clinical practice, including particularly pharmaceutical prescribing. These changes may be good or bad – the benefits are in many cases, at best, unproven – but demographic trends are a minor issue.

Everyone in the research community knows this, but these clear and consistent findings have had no discernible impact on the public discourse. The aging population has become a classic "zombie," an idea that is intellectually dead but refuses to be buried. It is constantly revived to stalk through public discussion because it is intuitively plausible, and because it serves to distract attention from the serious questions of why clinical practice has been changing and whether the benefits justify the increasing costs. (The zombie of aging is also used to support spurious claims that public healthcare is "unsustainable.")

The aging zombie is extensively documented. The parallels, however, suggest that obesity may emerge as a new zombie. The point is not that obesity is not associated with illness, or that there is not more of it around. That is universally conceded, just as it is for aging. But watch for those truths to be recruited into an explanation for escalating healthcare costs. And obesity has the attractive feature that, unlike aging, it can be attributed to the "unhealthy choices" of the obese themselves.

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Fat people *choose* to eat too much and exercise too little, and their moral failings will bankrupt our healthcare system! (That music in the background, is that someone beating gently on the old user-fee drum?) The reality, again well documented, is that increasingly intensive clinical services are concentrated on a relatively small proportion of the population, mostly elderly, with multiple chronic conditions. Moreover, these service patterns tend to be highly variable across regions, apparently independent of evidence of patient needs. These observations should raise serious questions about the factors underlying trends over time; the illness does not necessarily dictate its own form (and cost) of treatment. Both clinicians and patients (me included) might like to think it does, for perfectly understandable reasons. But about 40 years of research on practice variations all says that this is an illusion.

Some of these chronic conditions may indeed be attributable to the long-term consequences of obesity, but as indicated in the findings of Banks et al. (2006), these effects may get washed out at the population level. Further, why do people become (and remain) obese in the first place? The so-called "individual" behaviours are deeply interwoven with the physical and social contexts.

Virtuous Vancouver, Naturally

Physical and social contexts are reflected in the large geographic variations in obesity rates within Canada (Shields and Tjepkema 2006). Adult rates were 11.7% in the Vancouver census metropolitan area, less than half the Calgary rate of 25.7% (Aha!). Canada-wide, the rates in census metropolitan areas averaged 20.2%, well below the 28.5% in smaller communities. In general, the bigger the city, the lower the obesity rate. Toronto weighs in at 15.1%; St. John's tops the municipal chart at 36.4%.

These differences underline in heavy ink the fallacy of interpreting obesity as purely a consequence of "unhealthy" individual choice. Why is Vancouver so low? Climate, for one thing. Active recreation is easily available all year, and this supports a culture of in- and outdoor exercise. Also, fruits and vegetables are of better quality than elsewhere in Canada, and they are cheaper. So Vancouverites are healthier. Why are people in bigger cities less obese? They can *walk*, and there are lots of places worth walking to. Traffic is congested, and high residential density supports good public transit. But visit any suburb, and think about where you can go without a car.

Sprawling Cities, Sprawling Waistlines – Who Made This Mess?

Shields and Tjepkema (2006) note that their results are consistent with those of American research, showing a relationship between obesity rates and "urban sprawl" – low residential density. And, indeed, the Seattle-based Sightline Institute (2006) reports that about 60% of Vancouver's population live in "compact neighbourhoods" – more than twice as high as in any urban area in the American northwest. (Obesity is not the only issue: "New research shows that ... people living in sprawling areas tend to suffer substantially more chronic ailments – including diabetes, asthma, and hypertension" [Sightline Institute 2006].)

Urban sprawl in the United States is powerfully driven by two public policies that Canada has mercifully been spared – interest on residential mortgages is deductible from individual taxable incomes, and the United States government massively funds the interstate highway system, including urban freeways. These support the mega-mall rather than the pedestrian-friendly neighbourhood "high street" that is still alive and well in many parts of Vancouver, and even in Toronto. The built environment, and public policies that shape it, can show up in major differences in obesity rates and in health status more generally. If we want people to exercise more, we have to plan our urban spaces so that they can, and have a reason to – not just on special occasions but in their everyday lives. Are we ready to start re-building cities to reverse 60 years of autophilia? Compact communities, tighter zoning, more public transit – but Jane Jacobs died last spring. Maybe our best long-run hope is the price of oil.

Eat, Eat! We Do It All for You!

So much for exercise. What about diet? Here the parallels (and contrasts) with tobacco become particularly interesting. In both cases, the problem of health improvement is conceptually simple. Don't smoke, eat less and eat better. Mr. Micawber put his finger on it: calories in and calories out. (But nothing is ever so simple. Basal metabolic rates may be sensitive to factors such as ambient temperatures, hours of sleep and exposure to environmental chemicals and pharmaceuticals, and these factors may be changing so as to reduce our base rates of calorie burning. Basal metabolic rates may also provide negative feedback in response to weight gain, but to varying degrees in different individuals. There is no shortage of suspects [Keith et al. 2006] – but, again, the regional variations are highly suggestive.) Mobilize the health promoters; problem solved.

But in each case large, powerful and politically well-connected industries depend on well-resourced and highly sophisticated marketing to promote unhealthy lifestyles. Billions are spent in both the tobacco and the food industries to "empower" people to make unhealthy choices. By hook or by crook.

Bluntly, improving population health requires putting the tobacco industry out of business. Full stop. Everybody under-

stands this. The industry can hardly be expected to go gentle into that good night; it has put up quite a fight. But an industry whose survival depends upon inducing children to become addicted to a toxic product is under a bit of a handicap in "normalizing" itself. (Adults do not take up smoking. Adults try to quit. Many succeed, eventually, but remain physiologically addicted for the rest of their life.) If tobacco were being brought to the market today, it would be targeted by the "War on Drugs."

The food industry is another matter entirely. We need its products, and mostly we enjoy them. Some of us try to cut down, but no one wants to quit. Nor is there any clear standard of normal use, no "natural" human diet. Our ancestors evolved throughout the Pleistocene to make use of whatever was available – opportunistic omnivores, like rats or skunks. We'll eat anything that does not eat us first. Human societies have thrived on a wide variety of different diets, then and now. Most of the early diets were heavy on fruits and vegetables – easier to catch. High-fat and high-sugar items were a real bonus – very efficient and calorie dense but unfortunately scarce. So our ancestors *really* liked those. We still do.

Fats and sugars are no longer scarce. Modern food technology has made them cheap as, well, chips. So a huge and highly profitable fast-food industry sells directly to our Pleistocene tastes, and, in case those should weaken, reinforces them with billions of dollars in advertising. How much is spent to promote broccoli?

The fast-food industry, like any other for-profit industry, operates on the Willie Sutton principle – producing unhealthy foods because they sell. Bad press may lead them to offer salads as well – with high-fat, high-sugar dressings. And fast eating goes with overeating. Meanwhile under-investment in public infrastructure combines with environmental scare stories to undermine confidence in the public water supply. (The billion-dollar bottled water industry survives on the promotion of "tapophobia." The folks at Perrier seem to be able to make designer water in infinite quantities from a single spring. [Many a swallow makes a spring?]) Better to get your water with colouring and lots of sugar added, *ad maioram gloriam* Coca-Cola. For us effete intellectual snobs, there's a big fat latte at Starbuck's.

"We Have Met the Enemy, and He Is Us" (Sort Of) – Pogo

Does an effective response to obesity include putting MacDonald's and Coca-Cola out of business? Good luck! But if not ... ? If sales of calorie-rich, nutrient-poor foods cannot be trimmed back, what hope is there for a lighter population? The industry can claim that it is simply responding to "consumer demand" – which on one level is true. Sellers of tobacco, pornography and illegal drugs could make the same claim (and some



have). But influencing the food industry issue is much tougher than trying to suppress a noxious and widely unpopular industry. Promoting healthy eating requires some complex fine-tuning of a large industry with a high level of public support, in ways that will certainly restrict profit opportunities. Not surprisingly, our politicians have little stomach for this.

Effective tobacco control backs up aggressive anti-smoking messages with a combination of heavy taxation, restrictions on industry promotion and legal prohibition of smoking in public spaces. Left on their own, the health promoters would be massively outgunned; they wouldn't stand a chance. Are any of these seriously contemplated for the food industry?

Efforts to keep soft-drink and fast-food promotion out of schools are commendable, and a lot more could be done through the schools – starting very early – to promote both healthy eating and more exercise. (A national daycare program could have provided an effective vehicle.) But that will require making greater fitness a serious public priority, that is, with organization, regulation and money. Like planning and re-building our urban environments, it is a large and long-term commitment. Is anyone really serious about this? Or should we just settle for preaching at the fatties? [HQ](#)

References

- Banks, J., M. Marmot, Z. Oldfield and J.P. Smith. 2006. "Disease and Disadvantage in the United States and in England." *Journal of the American Medical Association* 295(11): 2037–45.
- Gibbs, W.W. 2005. "Obesity: An Overblown Epidemic?" *Scientific American* 292(6): 70–7.
- Keith, S.W., D.T. Redden, P.T. Katzmarzyk, M.M. Boggiano, E.C. Hanlon, R.M. Benca, D. Ruden, A. Pietrobelli, J.L. Barger, K.R. Fontaine, C. Wang, L.J. Aronne, S.M. Wright, M. Baskin, N.V. Dhurandhar, M.C. Lijoi, C.M. Grilo, M. Deluca, A.O. Westfall and D.B. Allison. 2006. "Putative Contributors to the Secular Increase in Obesity: Exploring the Roads Less Traveled." *International Journal of Obesity* doi: 10.1038/sj.ijo.0803326: 1–10.
- Sanmartin, C., E. Ng, D. Blackwell, J. Gentleman, M. Martinez and C. Simile. 2004. *Joint Canada/United States Survey of Health, 2002–03*. Ottawa: Statistics Canada; and Bethesda, MD: National Centre for Health Statistics, Centres for Disease Control and Prevention.
- Shields, M. and M. Tjepkema. 2006. "Regional Differences in Obesity." *Health Reports* 17(3): 61–70.
- Siddiqi, A. and C. Hertzman. 2006. "Towards an Epidemiological Understanding of the Effects of Long-Term Institutional Changes on

Population Health: A Case Study of Canada versus the United States." *Social Science and Medicine* (submitted).

Sightline Institute. 2006. "Special Section: Sprawl and Health." In *Cascadia Scorecard 2006*. Seattle: Author.

Tjepkema, M. 2006. "Adult Obesity." *Health Reports* 17(3): 1–26.

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